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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,601	08/10/2001	Jani Ekman	930.336USW1	8153

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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT PAPER NUMBER

2618

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/927,601

Applicant(s)

EKMAN ET AL.

Examiner

Charles Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-10, 12-14 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### Detailed Action

1. This office action is for amendment received on 5/15/2006.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-10, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhalla et al. (US 5,949,773) in view of Vaara (US 6,400,951 B1).

**For claim 8**, Bhalla teaches a method of effecting handoff of a call in which at least one mobile station is engaged in a cellular communication network comprising plurality of cells [ the mobile station handoff steps in Fig. 4; the plurality of cell coverage area from 202, 204, col. 8, lines 23-28, Fig. 3], the method comprising

receiving from mobile station a handoff required indication indicating that handover is needed from a source controller to a target controller [ receiving a message from a mobile unit 103, in Fig. 3, requesting hand off from source system 202/source BSC 130 to target system 204/target BSC 250, col. 9, lines 14-17, in order to set up a communicating link for route data from target system via source system to PPDN (public packet data network) via IWF 214 (inter-working function)],

formulating at the source controller [source BSC] a packet [ the signaling packet according to IS-42, IS-634, IS-658, col. 10, line 51 to col. 11, line 2] address to the source gatekeeper [ to source MSC, col. 9, lines 22-26, Fig. 3],

said packet including control information comprising plurality of parameters [ the handoff request message having plurality of parameters is forward, addressed, to target BSC from

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source BSC via source MSC & target MSC (as gatekeepers) for setting up the handoff, the plurality of parameters also identifying the dedicated terrestrial link in col. 9, lines 14-59],

Bhalla teaches the handoff message has plurality of parameters, as the control information [col. 9, lines 34-37]; the source MSC (source gatekeeper) informs target MSC (target gatekeeper) that a handoff is required [col. 9, lines 26-29],

at the source gatekeeper, determining a handoff request should be forwarded [ the source MSC, gatekeeper, informs target MSC a handoff is required, as a determination & the target MSC selects dedicated terrestrial link, col. 9, lines 26-33],

and formulating a packet for forwarding to said target controller [a formatted handoff request message having plurality of parameters, routed from source BSC to source MSC, gatekeeper, col. 9, lines 18-26].

Bhalla teaches the handoff message has plurality of parameters, control information [col. 9, lines 34-37], the source MSC (source gatekeeper) informs target MSC (target gatekeeper) that a handoff is required [col. 9, lines 26-29],

but Bhalla fails to teach the control information comprising a candidate list identifying possible alternative controllers; and determining to which one of the target cell within said candidate list a handoff request should be forwarded.

Vaara teaches these features [in step 64, the BSC selects cells suitable as the target cells. The selected cells is the candidate list for handover; in step 67, the BSC selects one cell from the selected cells as target cell for handover, col. 9, lines 25-36; also in steps 74, 79 of Fig. 7], in order to provide better handoff service which considers the measurement result having cell list [ col. 5 lines 1-17]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Bhalla with Vaara's candidate cells

for handoff, in order to provide better handover service by considering the handoff candidates in the measurement list.

**For claim 9**, Bhalla teaches the method in claim 8 above, & wherein the target controller is in the same network zone as the source controller [ the same network zone connected by 268 for the source BSC & target BSC in Fig. 3], and wherein the packet generated by the source gatekeeper [source MSC] is address to the target controller [target BSC in Fig. 3].

**For claim 10**, Bhalla teaches the method in claim 8 above, & the handover to be effected to an external network having an external controller [PPDN network 163, Fig. 3, the external controller IWK 214], wherein the packet generated by the gatekeeper is address to an interface unit for said external network [ the packet generated by target SDU to the interface unit IWK214 for PPDN 163].

**For claim 13**, Bhalla fails to teach the features for this claim. teaches the method for Vara teaches the candidate list in claim 8 above, and the local area codes and cell identifiers from which possible alternative target controllers can be resolved [ the priority cell list includes the location area identifier LAI and cell identity CI, col. 1, lines 54-63], using the same reason in claim 8 above to combine Vaara to Bhalla.

**For claim 14**, Bhalla teaches the handover is to be effected from an external network [PPDN 163 in Fig. 3] having an external controller [IWF 214, as the external controller for PPDN external network].

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhalla in view of Vaara, as applied to claim 8 above, and further in view of Sayers et al. (US 6,539,237 B1).

**For claim 12**, Bhalla teaches the method as shown in claim 8 above. Bhalla & Vaara fails to teach the features for this claim.

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Sayers teaches the wherein the source gatekeeper is defined as an anchor gatekeeper [the P-BTS 27 is an anchor gatekeeper], and all the handover request are routed through that anchor gatekeeper [the P-BTS 27 provides all the functions for accessing to network, translation of called numbers, routing calls, col. 11, lines 4-18], in order to centralized the handoff control with one gatekeeper by utilizing an anchor gatekeeper. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Bhalla, Vaara with Sayers' anchor P-BTS 17, in order to centralized the handoff control with one gatekeeper by utilizing an anchor gatekeeper.

#### **Claims Objection**

4. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cited prior arts fail to teach the handover is to be effected between two network zone, **each having a respective gatekeeper and wherein the packet generated by the source gatekeeper is address to a target gatekeeper identified from the candidate list.**

#### **Allowable Subject Matter**

5. The following is an examiner's statement of reasons for allowance:

Claims 1-7 were indicated to be allowable over the prior art of record, in office action mailed 3/27/2006. The prior arts fail to teach the allowable features, singly, particularly, or in combination, associated with the foreign filing date benefit of 2/11/1999, for the structure having at least one gatekeeper connected to said controllers by a switched packet communication path, for handover a call,

wherein the controller including means for generating a handover required indication for a call and **packet generating means for generating a packet addressed to gatekeeper and**

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**the generated packet including control information comprising a candidate list of alternative cells to which the call could possibly be transferred and**

wherein the **gatekeeper includes selection means for selecting one of said alternative cells in said candidate list** and packet generating means for generating a packet for sending a handover request for handing over the call to said one of said alternative cells [ independent claim 1]

the receiving from said mobile station a handoff required indication indicating that handover is need from a source controller to a target controller;

formulating at the source controller a packet addressed to a source gatekeeper, said packet including control information comprising a candidate list identifying possibly alternative controllers; and

at the source gatekeeper, determined to which one of said target controller with said candidate list a handoff request should be forwarded and formulating a packet for forwarding to said target controller [ independent claim 8].

The dependent claims are also allowable due to their dependency upon the independent claim and comprising additional claimed features associated to the features of the independent claims.

The closest prior art Sayers US 6,539,237) teaches the plurality of P-BTS [Fig. 4] having a gatekeeper 41, for the handover call between P-BTS [col. 11, lines 44-51] having private LAN network and public network [Fig. 4, col. 10, line 64 to col. 11, line 18], but failed to teach the controller including means for generating a handover required indication for a call and **packet generating means** for generating a packet, including a candidate list of alternative cells; the gatekeeper includes selection means for selecting one of said alternative cells in said candidate list.

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**Vaara (US US 6,400,951 B1)** teaches candidate list of alternative cell to which a call could be possibly be transferred [in step 64, the BSC selects cells suitable as the target cells. The selected cells is the candidate list for handover; in step 67, the BSC selects one cell from the selected cells as target cell for handover, col. 9, lines 25-36; similar in steps 74, 79 of Fig. 7], but failed to teach the selection means, the generating packet including a candidate list.

Other prior arts in below were also considered, but they fail to teach the above allowable features.

**Thomas et al. (US 6,421,339 B1)** teaches the gateway 26 is defined for ISDN network, gateway 24 is defined for ATM network, and gateway 22 is defined for PSTN network, the gatekeeper 44 is connected, via packet data network 30 & R/GW 34/28 to gateways 24, 32, 26 for forwarding a call [abstract, (Fig. 1, col. 3, lines 6-10)].

**Hannula et al. (US 6,366,893 B2)** teaches the service gateway 10 has conversion 152 in Fig. 4 for interfacing to various payment protocols [abstract, figure in cover page, Fig. 1, Fig. 5-6], for the payment transaction interfacing [ col. 8, line 66 to col. 9, line 2; col. 9, lines 61-64].

**Haga (US 6,366,576 B1)** teaches routing calls between a first telecommunicaiton network and an external telecommunication network having gatekeeper and gateway 1/gateway 2 [abstract, Fig. 1-2].

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



***Response to Arguments***

6. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's amendment for canceling claims 15-16 & claims 1-14 were indicated to be allowable,

a new reference **Bhalla et al. (US 5,949,773)**, together with **Vaara**, teaches the claimed features in independent claim 8.

Bhalla teaches a method for receiving from mobile station a handoff required indication that handover is needed from a source controller to a target controller [ receiving a message from a mobile unit 103, in Fig. 3, requesting hand off from source system 202/source BSC 130 to target system 204/target BSC 250, col. 9, lines 14-17, in order to set up a communicating link for route data from target system via source system to PPDN (public packet data network) via IWF 214 (inter-working function)],

formulating at the source controller [source BSC] a packet [ the signaling packet according to IS-42, IS-634, IS-658, col. 10, line 51 to col. 11, line 2] address to the source gatekeeper [ to source MSC, col. 9, lines 22-26, Fig. 3],

said packet including control information comprising plurality of parameters [ the handoff request message having plurality of parameters is forward, addressed, to target BSC from source BSC via source MSC & target MSC (as gatekeepers) for setting up the handoff, the plurality of parameters also identifying the dedicated terrestrial link in col. 9, lines 14-59].

Bhalla teaches the handoff message has plurality of parameters, as the control information [col. 9, lines 34-37]; the source MSC (source gatekeeper) informs target MSC (target gatekeeper) that a handoff is required [col. 9, lines 26-29],

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but Bhalla fails to teach a candidate list identifying possible alternative controllers; and determining to which one of the target cell within said candidate list a handoff request should be forwarded.


Vaara teaches teach a candidate list identifying possible alternative controllers; and determining to which one of the target cell within said candidate list a handoff request should be forwarded [ in step 64, the BSC selects cells suitable as the target cells. The selected cells is the candidate list for handover; in step 67, the BSC selects one cell from the selected cells as target cell for handover, col. 9, lines 25-36; also in steps 74, 79 of Fig. 7].

### Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow 

July 6, 2006.

  
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